The Impact of COVID-19 on Patient Experience Within a Midwest Hospital System: A Case Study

Alisa Drapeaux, DPT, ATC[1] [iD], John A. Jenson[2],
and Nicholas Fustino, MD, CPXP[3]

Abstract

Patient-centered communication and patient-provider relationships directly affect patient outcomes. The purpose of this study was to compare inpatient perception of provider/nurse communication in both COVID versus non-COVID diagnoses groups. A qualitative retrospective study was conducted by performing a priori *coding* analysis on Hospital Consumer Assessment of Healthcare Providers and Systems surveys from 4 different hospitals for both COVID and non-COVID diagnoses. Five themes emerged from non-COVID patient data: inconsistent health care provider communication, variable patient-provider education, pandemic influenced patient satisfaction and mental health stress, inconsistent hospital services, and stable provider professionalism. Five themes arose from the COVID patient data: provider gratitude, controversial communication methods, consistent patient education, lack of quality patient care, and poor timeliness. There is evidence of shared patient perceptions between both COVID and non-COVID patients, but also differences including timeliness and quality of care. The pandemic influenced all patients by creating non-mutually exclusive themes including overall gratitude and patient satisfaction. Future research should focus on a quantitative analysis of pandemic-related patient-provider communication effects on patient outcomes.

Keywords

communication, COVID-19, provider, nursing, physician engagement, HCAHPS

Introduction

Coronavirus Description

In December of 2019, multiple cases of respiratory illness arose in the Wuhan Province of China. This illness was identified as a novel coronavirus, COVID-19. The virus rapidly spread across the world, with the World Health Organization (WHO) declaring a Global health Emergency at the end of January 2020 (1).

Prevalence

Over 600 000 Americans have died from this respiratory disease, with the number still rising (2). Due to the epidemic nature of this disease, research evolved rapidly to implement preventative measures, identify symptoms/signs, develop treatment protocols, and initiate vaccine development. Providers were reacting in real-time to published observations of disease characteristics.

Symptoms

The symptoms identified initially were fever, cough, fatigue, sputum production, dyspnea, and had an overall mortality rate of 15% at the pandemic outset (3). Furthermore, they posited that human-to-human airborne transmission was a possible mode of transmission, and recommended the use of personal protective equipment (PPE) (3). A battery of precautions were adopted for the treatment of coronavirus patients, including PPE requirements of masks and face

[1] Health Sciences, Drake University, Des Moines, IA, USA
[2] Drake University, Des Moines, IA, USA
[3] Pediatric Oncology and Hematology, Blank Children's Hospital, Des Moines, IA, USA

Corresponding Author:
Alisa Drapeaux, Health Sciences, Drake University, 2507 University Ave Des Moines, IA 50311, USA.
Email: Alisa.drapeaux@drake.edu

shields, in addition to visitor restrictions in hospitals (4). Traditional healthcare delivery, communication modalities, and the physician-patient dynamic were completely upended.

Patient Satisfaction

With the standardized protocols recommended by the Centers for Disease Control and Prevention (CDC) and World Health Organization (WHO), hospitals underwent several changes to adapt and comply to promote patient, visitor, and staff safety. According to CDC pandemic protocols in 2020, the following were implemented by hospital systems to prevent the spread of the infection: social distancing, PPE guidelines, and restricted visitor access (2). Key et al (5) conducted an early study within a bounded hospital system experiencing an influx of coronavirus admissions. Survey results demonstrated that patients were highly satisfied with their care and produced positive qualitative themes based on gratitude. However, it was also demonstrated that patients self-reported a degree of loneliness while admitted as a patient. With CDC guidelines in place, specifically the hospital visitor restrictors, studies have demonstrated that contact isolation has correlated with negative psychological impacts, including depression, anxiety, and anger with contact isolation (5,6).

Patient satisfaction in hospital settings is commonly measured through standardized questionnaires. Recent cross-sectional research utilizing Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) and Quality of Life Patient/Cancer Survivor (QOL-CS) identified certain factors affecting patient satisfaction in cancer patients, including a lack of social support (identified via relationship status) uncertainty regarding outcomes, insurance status, and lastly, patient interaction with healthcare providers(7). A direct relationship between patient-provider interaction and Health-Related Quality of Life (HRQOL) results was discovered, in addition to the important role of the nursing staff. With reported patient satisfaction scores (PSS) and HRQOL results, it was hypothesized that patient connection, engagement, and education are linked to improved health outcomes (7). Alaloul et al. (2019) also stressed the importance of effective communication, reporting that it is essential to healthcare.

Furthermore, improved patient satisfaction is known to be positively correlated with improved ratings of surgeons (8). Consequently, patients' self-reported outcomes may be biased to perceived levels of pain control postoperative or overall quality of nursing (8). Further evidence suggests that patient satisfaction influences a variety of important behaviors, including willingness to seek consultation, continuity of care, and retention of information (9).

Patient Communication

Provider-patient communication has also been shown to correlate with high levels of patient satisfaction (6). Patient-provider miscommunication has led to poor diagnostic procedures or overprescribing medications (10). Saukko et al (10) (2019) investigated the diagnosis and treatment of urinary tract infections in older populations. Significant discrepancies were discovered between staff (nursing) and older patients in the hospital, which is due to a potential knowledge or education deficit amongst providers on the correct protocols, signs/symptoms, and diagnostic procedures for urinary tract infections (10).

Patient satisfaction, along with the overall quality of care, has been positively correlated with nurse communication (11). Research has demonstrated that nurse communication and compliance is a key factor assisting with the spread of infectious diseases (10). Furthermore, suboptimal communication has also been linked to negative consequences (12). With suboptimal communication, there has been a correlation with decreased patient autonomy and a below-average symptom assessment. In addition, the same study demonstrated that patients had an overall consensus that their expectations were unmet during provider interactions, and providers were distressed with their encounters (12).

Clinical Outcomes and Reimbursement

Multiple studies have demonstrated the correlation between patient communication and clinical outcomes (7,–9,11,13–). Specifically, it has been found that higher patient satisfaction scores are associated with superior clinical outcomes (13). The better clinical outcomes included a decrease in hospital readmissions and overall postoperative complications (13). Also, when staffing workload was higher, patients felt that nurses are not delivering the care that is required (14). Patient experience has also been a critical performance measure in the value-based purchasing era (15). The Medicare shared savings program has set forth guidelines to reimburse providers based on patient satisfaction and other performance metrics (15). With an ambiguous pandemic, the coronavirus has the potential to affect both patient-provider communication and subsequent financial implications.

Purpose

The purpose of this study was to understand the participants' perception of provider communication during their admitted inpatient stay (for both COVID and non-COVID patients). With limited evidence describing the patient perception of provider communication during the pandemic, the aim of this qualitative retrospective study was to describe the impact of the pandemic on patient-provider interactions.

Methods

Study Setting, Sampling, Design, and Procedure

Retrospective data was collected from admissions between March 1, 2020, to September 17, 2020, from patients with

and without a COVID-19 diagnosis at four hospitals (3 adults, 1 pediatric) within a comprehensive healthcare network in a Midwestern metro region. The diagnosis was determined based on the patients' assigned Medical Record Number (MRN). The 4 hospitals staff 704 beds; inclusive of 44 Pediatric, 53 neonatal/pediatric intensive care unit (ICU), 386 Medicine/Surgery (adult), 68 obstetrics/gynecology, 52 adult ICU, 49 rehabilitation, and 52 psychiatry/substance abuse. This study was submitted and approved through the Institutional Review Board (IRB) under the exempt category. The IRB proposal number is 2020–21030. All participant data were deidentified prior to distribution to the investigators. Written informed consent was assumed with the participant's voluntary participation in the HCAHPS survey at discharge. According to CMS guidelines, patients are eligible to receive an HCAHPS survey if their diagnosis at discharge is "Non-psychiatric MS-DRG/principal" (16). If participants were unable to complete the survey, a caregiver or other individual was permitted to assist or complete the survey with participant consent. Inclusion criteria included all HCAHPS data that was collected from the four hospitals from March 1, 2020, to September 17, 2020, for all participants who were admitted to the hospital (Figures 1 and 2). Prevalence of COVID-19 state hospitalizations during the 6.5 months of data collection peaked at 54 cases per 100 000 in April (17). With using the ICD-10 diagnosis, all participants were placed into (2) groups: Non-COVID diagnosis or COVID diagnosis to create 2 generalized groups for qualitative comparison of patient perception of provider communication. For this study, there were no exclusion criteria.
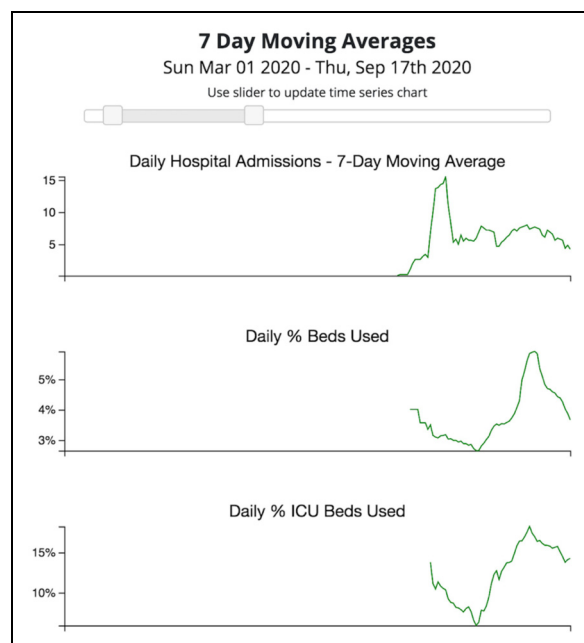

Figure 1. Local county hospitalizations during data collection (18).

Survey

HCAHPS surveys with supplementary Press-Ganey® questions were distributed to eligible patients per institutional protocol and participation was voluntary. Data was collected from all 4 hospitals amongst the Midwest hospital institution, where only 3 units or floors were assigned as isolated COVID floors, and 1 floor as mixed diagnoses. HCAHPS surveys were distributed to each patient that was admitted (non-COVID and COVID diagnoses), and the response rate was based on those that voluntarily chose to complete the survey at hospital discharge. There were 3786 surveys returned during the period of the study: 309 surveys from COVID patients and 3477 surveys from non-COVID patients (Figure 3). The HCAHPS survey included questions within the following domains: Communication with Nurses, Communication with Doctors, Hospital Environment, Responsiveness of Hospital Staff, Communication about Medicines, Discharge Information, Global Questions, Care Transitions, and Demographic Questions.

Press-Ganey® component included 2 written-response questions: "What went well about your visit? Please describe what happened, and how it felt to you." and "What do you wish had gone differently? Please describe what happened, and how it felt to you." The written response to these questions was used in our open coding, thematic analysis.

Data Analysis

Investigators exported all HCAHPS qualitative survey data to an excel spreadsheet, which was separated based on designated COVID inpatient units and non-COVID units. Data was reviewed and coded based on focus, open-coding by multiple investigators. Thematic analysis was conducted with using a priori themes and predetermined subcategories by the investigators. Investigators continued in-vivo coding until data saturation was reached by reviewing all survey qualitative comments for both the non-COVID and COVID surveys. The supervising organizational contacts were able to review the generated themes to assure triangulation was met with the data analysis.

Results

Non-COVID Patients

Five primary themes emerged after coding the qualitative comments from the non-COVID diagnostic group. The primary themes identified included inconsistent healthcare provider communication, varying patient-provider education, pandemic influenced patient satisfaction and mental health stress, inconsistent hospital services, and stable professionalism amongst providers (Table 1). Several subthemes were identified within inconsistent healthcare provider communication for the non-COVID patient data, including adequate physician responsiveness to questions, poor quality physician communication compared to nurses, and decreased clarity
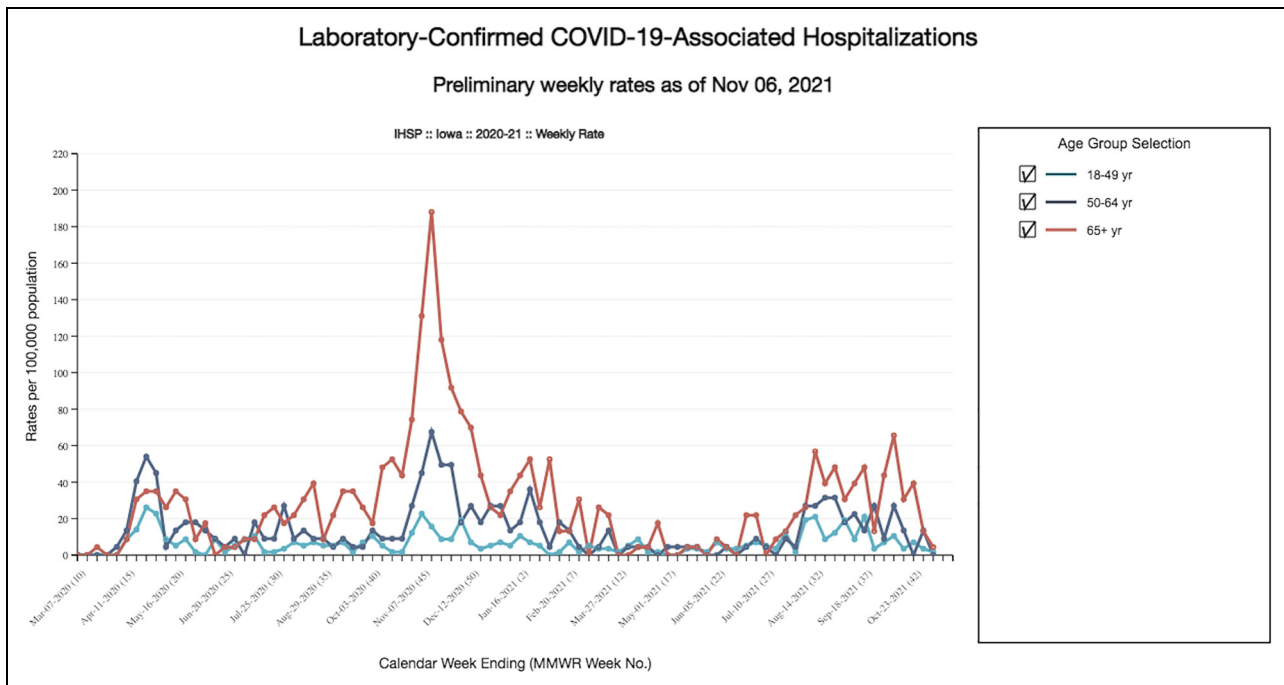
Figure 2. Confirmed COVID-19 Iowa hospitalizations with delineation between 3 different age groups between March 2020 and November 2021 (17).
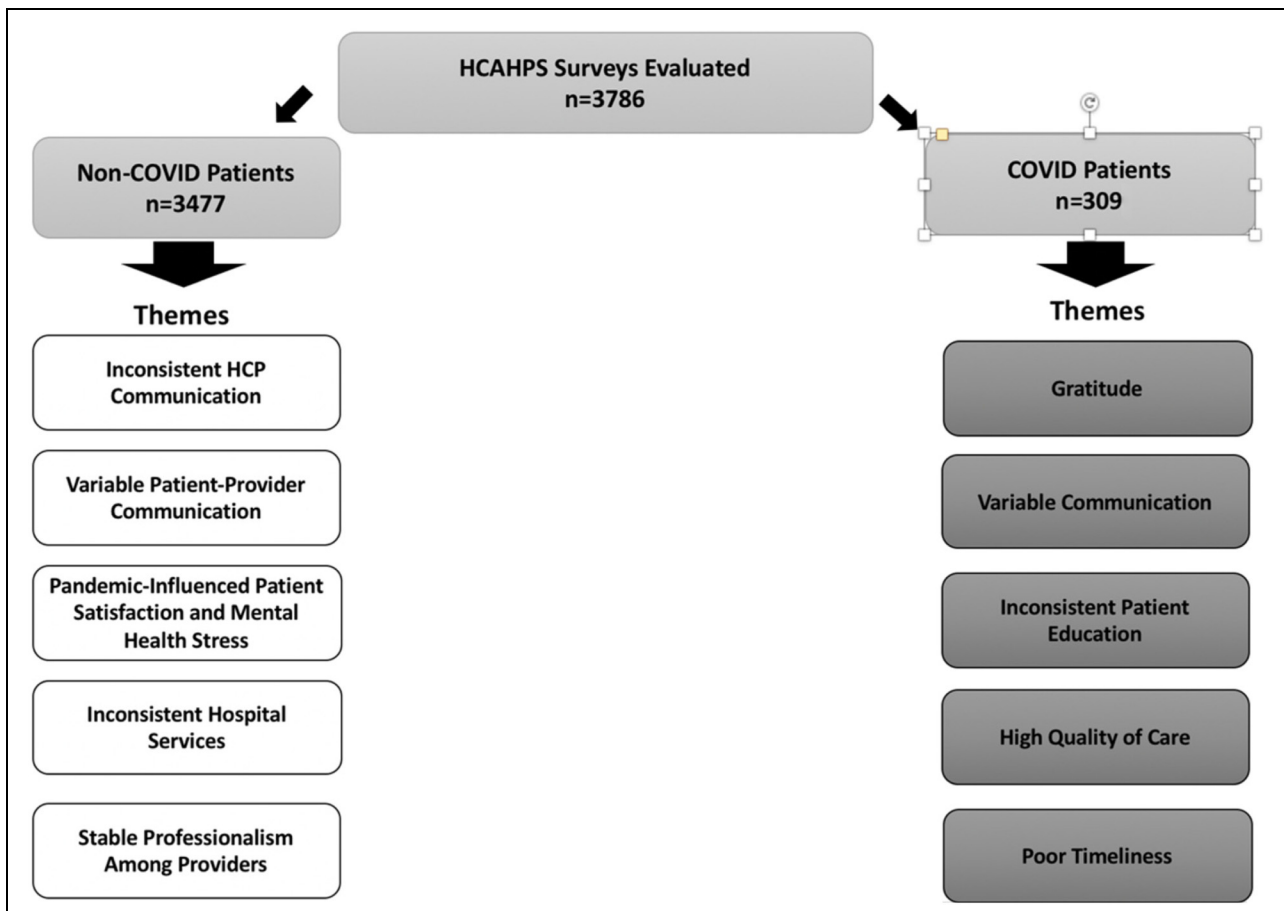

Figure 3. Descriptive statistics and thematic analysis.

Table 1. Non-COVID Themes for Inpatients Admitted from March 2020 to August 2020.

Themes	Example quotation
Varying Patient-Provider Education	"Questions about eating that weren't being fully answered by providers"
Inconsistent Health Care Provider Communication	"I didn't know he was experiencing bronchiolitis until I read it on his record "explained everything that would happen before it did" {wish that} "Doctors would of (sic) taken more time to explain my condition & why & explained the tests I underwent. Better communication would of (sic) helped"
Pandemic Influenced Patient Satisfaction and Mental Health Stress	"Someone needed to keep in better contact with my wife who was not allowed to be with me during pandemic— only three calls during seven days in hospital."
Inconsistent Hospital Services	"went to bathroom unaided and fell" "Food was cold in Styrofoam all the time - Had to always be warmed up. Asked for more than one entree once would not let me & my insurance pays you." "Nurses or aids would not answer call button and when they did it took almost 2 hrs. to get water. It also took 2hrs for someone to help me go to the bathroom." "The nurse that was assigned to me was overworked and seemed very anxious."
Stable Professionalism among providers	"I will have to say the medical staff were well trained & were extremely professional."

Table 2. COVID Themes for Patients Admitted from March 2020 to August 2020.

Themes	Example quotation
Gratitude	"I was on the power O2 had COVID. Everyone was doing everything they could to help. They were all wonderful. Thank you." "God Bless you & the doctors and nurses" "happy with everything" "all is perfect" "could not have had better care"
Inconsistent Communication	"Nurses were excellent in providing info I didn't get from doctors." "did not feel I knew if they found anything"
Variable Patient Education	"Kept informed as each test was concluded kind, gentle & comforting care—felt cared FOR!" "had to specifically REQUEST what the results were & what they meant"
Quality of Patient Care	"My treatment started soon after I got there. Everything was explained. I improved after two day (sic) and I could tell the treatment was working. The care was outstanding."
Timeliness	"waited 1 ½ hrs. trying to get a nurse" "I got 'dropped' and saw no doctor for 2 days" "waited 40 minutes for BR duties after pushing nurse button" "… Meal delivery was 3 hours"

"alone." The third subtheme was difficulty with communication due to mask donning. The fourth subtheme identified by the qualitative data focused on a "tense" environment within the hospital setting.

Inconsistent hospital services also had four subthemes. The first subtheme consistently found in qualitative patient data was the description of overwhelmed, overworked, and stressed staff and nurses amongst the non-COVID floors. The second subtheme was an inconsistent bathroom and food services during their hospital stay. The third subtheme surrounded inconsistent collaboration amongst interdepartmental teams. Fourth, there was a sense that the environment within the hospital was "different."

There were two subthemes identified under the theme of stable professionalism amongst providers. The first was that the care received was excellent, and that providers were respectful. Similarly, the second subtheme was the self-reported consistency of patients feeling like they were treated with respect and dignity.

COVID Patients

COVID diagnosis qualitative data was also coded for themes and resulted in a total of 5 primary themes after data

regarding diagnosis. Furthermore, sub-themes under the theme of varying patient-provider education included: commentary identifying a lack of clarity on diagnoses and explanation on why specific diagnostic tests were ordered by providers. The second subtheme identified in the analysis, in contrast, was an overall positive response to provider education.

Pandemic influenced patient satisfaction had four subthemes, which included the subjective reporting of how COVID-19 influenced their hospital stay. The first subtheme identified surrounded poor communication with family members at home. The second subtheme involved data reporting prominence of mental health problems, with qualitative data including descriptors like "sad" or "depressed" or

saturation was reached. The 5 primary themes identified were gratitude, inconsistent communication, variable patient education, quality of patient care, and timeliness (Table 2). Communication and patient education themes were inconsistent, representing both negative and positive patient commentary. Communication had a negative commentary that focused on poor intra-provider communication, inconsistent patient education regarding their diagnoses, and poor clarity on the reasoning behind ordering specific diagnostic procedures. However, some of the captured self-reported survey data demonstrated positive comments regarding provider communication and the ability for patients to have a choice regarding their treatment.

The most common theme identified amongst the coronavirus commentary was that of gratitude, which strongly overlapped with the theme of quality patient care. A significant portion of patient commentary consisted of patients thanking providers for the care they received. These ranged from complimenting the providers, overall medical treatment, and kindness from the hospital staff.

Discussion

The purpose of this study was to compare COVID and non-COVID diagnosed inpatients' perception of provider/nurse communication during their hospital stay. Hospitals have taken significant measures to ameliorate the effects of the coronavirus pandemic. In this hospital system, these measures included, but were not limited to significant personal protective equipment (PPE) requirements and restrictions on patient visitation. This study was conducted with the goal of assessing the effects of the pandemic in conjunction with changes in patient care delivery on patients' perceptions of their care team and inpatient stay. Nurse/provider-patient communication plays an important role in patient satisfaction, a measurement of quality of care linked both to federal compensation through the Medicare/Medicaid programs, and to improve clinical outcomes (7).

The qualitative case study utilized information and commentary taken from 4 hospitals in the Midwestern urban area. The retrospective data received from the surveyed populations were reviewed and themes were identified in vivo. Similar and contrary themes emerged from both the COVID and non-COVID diagnosis groups.

COVID Themes

Gratitude. Amongst the group diagnosed with coronavirus, the most common theme of patient commentary was gratitude. A plurality of patients expressed appreciation to the organization for their care, offering statements of thanks and complimenting the service provided. This finding supports the Key et al (2021) qualitative study, where patients who were diagnosed with COVID-19 expressed an abundance of gratitude towards the hospital staff for the quality of care and compassion during their hospital stay.

Timeliness. Another common theme emerging from the coronavirus patient group was the timeliness of care. When they requested nurses, ancillary services, and medical professionals, patients felt it took a significant amount of time for the patients to receive these services. Additional services (eg, food services) were also mentioned by several patients regarding the lack of timeliness. It is projected that the pandemic-influenced stress, higher workload, potential provider burnout, and temporal requirements of donning PPE may lead to this emerging theme from this data. As Jones et al (2015) reported, a higher workload amongst nursing staff led to patients feeling like their general emotional issues were not addressed.

Non-COVID Themes

Hospital Services. A similar theme emerged from the non-COVID patient commentary relating to the delivery and quality of hospital services. Patients reported the poor quality of bathrooms in their inpatient rooms and overall food service-related issues. Investigators also coded several comments regarding staffing issues, collaboration deficits amongst providers, and general negative perceptions of hospital environments. Specifically, there were comments regarding the general patient perception that hospital floors had low staffing levels amongst nurses. During high nurse workloads, care is subpar with patients reporting lower satisfaction and quality of care (14).

Patient Satisfaction. One of the themes of the non-COVID group was pandemic-influenced patient satisfaction. Several significant sub-themes within the qualitative data both supported and contradicted some of the existing literature. Specifically, this study identified multiple comments related to overall isolation from family members, particularly within the non-COVID diagnosis group. This finding supports Key et al (2021) quantitative results, which found that two-thirds of their COVID patient population suffered loneliness, likely as a result of the access restrictions enforced by their hospital. Contrary to the current hospital groups patients, participants were able to remain in contact with family members by digital platforms (5). The pandemic induced changes in hospital access for family members, which prompted overall self-reported loneliness.

Subsequently, mental health stress was another portion of the non-COVID diagnostic themes. The qualitative assessment revealed that a significant number of patient comments reported feelings of anger, depression, and loneliness. Abad et al (2010) found similar findings demonstrating that isolation due to infection control measures correlated with higher scores of patient depression, anxiety, and loneliness. Furthermore, Jones et al (2015) demonstrated that higher nurse workload and nurse burnout led to patients reporting that their emotional and psychological needs were not attended too. It is essential for additional research to further

examine the psychological impacts of patient access restriction, as well as its impact on patient satisfaction and communication with the care team.

A subset of the patient satisfaction theme was the overall effect of personal protective equipment use on patient-provider communication. Specifically, communication barriers were identified due to mask donning through several patient comments. With the use of PPE, it has been shown that mask donning changes the overall perception of provider empathy (5). Key et al (2021) found 10% of patients complained of difficulty communicating with providers due to PPE. Multiple participants noted that there was a decline in overall empathy with mask-wearing (5). Future research should focus on what specific patient demographics or characteristics are part of this subset population that is affected by the use of PPE, particularly self-reported changes in communication or empathy.

Shared Themes. Themes common in the commentary of both the COVID and non-COVID groups involved communication and education of patients. In the non-COVID diagnosis group, an interesting dichotomy of patient perception was elucidated. Patients often spoke well of nurse responsiveness to questions, and also, physicians tended to receive high marks on the Press Ganey survey regarding their education on diagnosis and treatment plan. However, patients also expressed confusion regarding their diagnosis or poor clarity on why specific diagnostic studies were ordered. This mixed perception of provider communication and education is echoed in the COVID diagnosis group as well. Retrospective data portrayed comments that focused on overall uncertainty on final diagnosis and subsequent treatment. In contrast, the non-COVID diagnosis group generated several comments that focused on overall gratitude towards the healthcare provider and their skillset. These subthemes demonstrate the variability amongst the survey qualitative results within the non-COVID diagnosis group, and may have discrepancies based on other factors such as a specific hospital or hospital unit during inpatient admission. This dichotomy may be variable due to the data including several different specialties and providers amongst the 4 hospitals.

Clinical Implications. The findings of our study could be utilized for future quality improvement initiatives aimed to improve patient experience and communication as the COVID-19 pandemic era continues. Efforts could specifically target positive reinforcement of physicians and staff regarding patient gratitude and professionalism. Also, this may provide the opportunity to implement training programs to improve patient education, inpatient team communication, and patient perception of isolation. Our study extends the limited evidence on patient perception during COVID-19 by supporting several studies on the correlation between provider communication and patient satisfaction, including the influence of PPE on overall provider empathy and communication (5,7,10).

Limitations. This study relies on a sample of COVID-19 patients, taken from a single healthcare system in a narrow geographic area with particular demographic characteristics. In addition, this data was taken during a six-month period relatively early in the coronavirus pandemic. Medical management and preventative measures, as well as hospital policies, have evolved and sentiments may change over time as well. Furthermore, the survey is only available in English and Spanish languages, creating a selection bias. A nonresponse bias is also inherent and well known with regards to patient experience survey methodology. Lastly, within our particular patient demographic, there could be confounding variables with regards to patient satisfaction, including socioeconomic and employment status, which may weaken the strength of future research using the same data-set (19).

However, this study has utilized a valid questionnaire to assess patient perceptions of nurse communication during the era of COVID-19, while separating out COVID and non-COVID diagnoses through the cohort system to protect the validity of the results. Furthermore, this study relied on unguided patient commentary to gain insight into the most significant perceptions of the patient population.

Conclusion

This retrospective qualitative study found that both non-COVID and COVID patient groups in a large urban healthcare system perceived a high quality of medical care, with more gratitude observed in the COVID diagnosis group. However, the COVID diagnosis group also reported inconsistent patient education and patient-provider communication, concerns about hospital services, staffing shortages, and overworked nurses. Finally, the COVID diagnosis group also demonstrated a general theme of self-reported mental health issues due to feelings of isolation or loneliness due to new hospital access restrictions. Future research should review the correlation between new mental health diagnoses that emerged within the pandemic, specifically with preliminary COVID diagnosis. In addition, a retrospective review of quantitative patient satisfaction data is recommended to determine significance with hospital stay and Press-Ganey satisfaction scores.

Ethical Approval

Statement of Human and Animal Rights

Statement of Informed Consent

Declaration of Conflicting Interests

Funding

ORCID iD

Alisa Drapeaux 🔘 https://orcid.org/0000-0001-5100-5969

References

1. Taylor D. Timeline of the Coronavirus Pandemic. *The New York Times*. March 16, 2021. Accessed March 18, 2021. https://www.nytimes.com/article/coronavirus-timeline.html

2. Provisional Death Counts for Coronavirus Disease (COVID-19). Centers for Disease Control and Prevention website. Updated July 29, 2021. Accessed July 29th, 2021. 2019. https://www.cdc.gov/nchs/nvss/vsrr/covid19/index.htm

3. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan. China. The Lancet. 2020;395(10228):497-506. https://doi.org/10.1016/S0140-6736(20)30183-5

4. Infection prevention and control during health care when coronavirus disease (COVID-19) is suspected or confirmed. *World Health Organization*. Updated June 29, 2020. Accessed March 16, 2021. https://www.who.int/publications/i/item/WHO-2019-nCoV-IPC-2020.4

5. Key T, Kulkarni A, Kandhari V, Jawad Z, Hughes A, Mohanty K. The patient experience of inpatient care during the COVID-19 pandemic: exploring patient perceptions, communication, and quality of care at a university teaching hospital in the United Kingdom. Journal of Patient Experience. 2021;8:1-6. doi:10.1177/2374373521997742

6. Williams S, Weinman J, Dale J. Doctor-patient communication and patient satisfaction: a review. Fam Pract. 1998;15:480-92.

7. Alaloul F, Myers J, Masterson KM, DiCicco J, Collins MP, Hogan F. Patient experience factors and health-related quality of life in hospitalized individuals. Oncol Nurs Forum. 2019;46(2):238 + . Gale Academic OneFile, link.gale.com/apps/doc/A588991413/AONE?u=drakeu_main&sid=AONE&xid=1243330a. Accessed 17 Mar. 2021.

8. Tsai TC, Orav E, Jha A. Patient satisfaction and quality of surgical care in hospitals. Ann Surg. 2016;261(1):2-8. https://dx.doi.org/10.1097%2FSLA.0000000000000765

9. Traiki B, Al Shammari S T, Al Ali M, Aljomah N, Alhassan N, Alkhayal K, et al. Impact of COVID-19 pandemic on patient satisfaction and surgical outcomes: a retrospective and cross-sectional study. Ann Med Surg. 2020;58:14-9.

10. Saukko P, Oppenheim B, Cooper M, Rousham E. Gaps in communication between different staff groups and older adult patients foster unnecessary antibiotic prescribing for urinary tract infections in hospitals: a qualitative translation approach. Antimicrobial Resistance Infection Control. 2019;8:130. https://doi.org/10.1186/s13756-019-0587-2 8:130.

11. Bartlett Ellis RJ, Bakoyannis G, Haase JE, Boyer K, Carpenter JS. Patient perceptions of provider and hospital factors associated with new medication communication. West J Nurs Res. 2016;38:1139-54.

12. Suarez NR, Urtecho M, Nyquist CA, Jaramillo C, Yeow M, Thorsteinsdottir B, et al. Consequences of suboptimal communication for patients with limited English proficiency in the intensive care unit and suggestions for a way forward: a qualitative study of healthcare team perceptions. J Crit Care. 2021;61:247-51. https://doi.org/10.1016/j.jcrc.2020.10.012

13. Prabhu K L, Cleghorn MC, Elnahas A, Tse A, Maeda A, Quereshy F, et al. Is quality important to our patients? The relationship between surgical outcomes and patient satisfaction. BMJ Qual Saf. 2018;27:48-52. https://dx.doi.org/10.1136/bmjqs-2017-007071

14. Jones TL, Hamilton P, Murry N. Unfinished nursing care, missed care, and implicitly rationed care. State of the science review. Int J Nurs Stud. 2015;52:1121-37.

15. Berkowitz B. The patient experience and patient satisfaction: measurement of a complex dynamic. The Online Journal of Issues in Nursing. 2016;21(1), Manuscript 1.

16. CMS. (Retrieved 11/10/21). 2010. https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/hospitalqualityinits/downloads/hospitalhcahpsfactsheet201007.pdf.

17. COVID-NET: A Weekly Summary of COVID-19 Hospitalizations, 2021 (Retrieved 11/14/21). https://gis.cdc.gov/grasp/covidnet/COVID19_3.html.

18. CDC. (Retrieved 11/12/21). 2021. https://covid.cdc.gov/covid-data-tracker/#datatracker-home.

19. Trant AA, Szekely BS, Mougalian SP, DiGiovanna MU, Sanft TU, Hofstatter EU. The impact of communication style on patient satisfaction. Breast Cancer Res Treat. 2019;176(2):349. https://dx.doi.org.cowles-proxy.drake.edu/10.1007/s10549-019-05232-w

Author Biographies

Dr. Drapeaux is an Assistant Professor of Health Sciences at Drake University in Des Moines, IA. She is a licensed physical therapist and certified athletic trainer, and currently in her final year of her PhD at Drake University.

John Jenson is a recent graduate of Drake University.

Dr. Fustino is currently the division director of the Blank Children's Cancer and Blood Disorders Center in Des Moines, Iowa. He is also a certified patient experience professional and patient experience physician champion for Unity Point Health-Des Moines.